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ABSTRACT

The dynamic involvement of both teachers and learners in the classroom is not a recent goal of educational reform. Various theorists in the history of psychology and education have made contributions to the approaches and research supporting this view. Many sound pedagogical programs to help teachers interact in the classroom have been developed and introduced into the schools. This paper examines the concept of Mediational Teaching, which pivots on the subtle, social interaction between the teacher and the learner in the enrichment of the student's learning experience. Defining mediational teaching as the process by which a mediator (teacher) organizes and interprets the world to the students, the paper focuses on the theoretical positions of two major figures of socio-cultural psychology, Lev Vygotsky and Reuven Feuerstein. The paper then describes a study of a recent, practical application of their instructional skills in Singapore, where Mediational Teaching is being incorporated into the preservice training modules. The paper highlights the evaluative aspects of the mediational skills approach in the primary classroom and elaborates key preliminary findings. Those findings include: (1) preservice teachers sent to the primary schools tended to focus on pupil behavior problems whereas those in secondary schools focuses on learning problems; (2) a few teachers indicated some conflict when their supervisors suggest a teaching style that does not allow for mediational teaching; and (3) the most difficult mediational skill to implement was mediation for self change. (Contains 14 references.) (HTH)

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ASSESSING GROWTH IN THINKING ABILITIES IN THE PRIMARY SCHOOL CLASSROOM

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Abstract

The dynamic involvement of both teachers and learners in the classroom is not a recent goal of educational reform. Various theorists in the history of psychology and education have made contributions to the approaches and research supporting this view. Many sound pedagogical programmes to help teachers interact in the classrooms have been developed and introduced into schools. This paper examines the concept of Mediational Teaching, pivoting on the subtle, social interaction between the teacher and the learner in the enrichment of the student's learning experience. It focuses on the work of two major figures of socio-cultural psychology, Lev Vygotsky and Reuven Feuerstein. Their theoretical positions are briefly examined followed by a study of a recent, practical application of their instructional skills in the classrooms of pre-service teachers. Mediational Teaching is discussed in terms of its relationship to current, educational change in Singapore . The evaluative aspects of the mediational skills approach in the primary classroom will be highlighted and key preliminary findings will be elaborated.

For the past year, Singapore's education has been engaged in a major examination of how to reform itself and the Ministry of Education has made several significant announcements in recent months. During the seventh international conference on thinking hosted by Singapore in June 1997, the prime minister himself spoke about the vision for the schools of the 21st century. He elaborated on the concept of "thinking schools and a learning nation" and how the education system has to be geared for continuing change to meet the needs of the next millenium. One of the foremost prerequisites of a thinking school is that it must itself be a learning organisation.

In Jan 1998 the Ministry prepared a document on the desired outcomes of education in Singapore and to put this into practice , one of the things which the ministry has decided to do is to develop the unique talents and abilities of every child to the full and to teach him to keep fit and healthy for life. As professional practitioners, every teacher must keep abreast of the latest in educational research, every teacher has to be a continual learner himself, seeking constantly to upgrade his instructional competencies. He must innovate and adapt classroom practices and keep up with the advances in his own subject. Principals and teachers are the heart and soul of our educational system and they make a difference to what our students learn, their motivation level and how they learn.

In this new view of education, there is an assumption that schooling must be involved in the enhancement of every student's learning potential. The primary focus of this paper addresses the concerns related to some of the essential elements of a restructured classroom environment . These essential elements of the "new" classroom include an understanding of the roots of cognitive revolution, the impetus of the current thinking movement and the nature of the changing classroom environments for learning. The classrooms of the next century are places in which teachers must strive to be cognitively creative in their instruction, to be able to enhance every student's autonomy and ability to think and to create conditions for optimal student achievement. It is a new paradigm that stresses the explicit need to teach students thinking.

Schooling is a very human enterprise and teachers play the key roles of diagnostician, interpreter, creator, and communicator in their mediational task. (Feuerstein, 1990). In the new classroom, the teacher provides for and encourages important social interactions in this environment. He acts as a facilitator of student learning, a coach, a mentor and a collaborator with students and other teachers. The classroom is linked to life beyond its boundaries, to the school as a whole, to other educators and to the entire community, including parents and other agents.

Mediational Teaching Skills

How can teachers assure that classroom activities will lead to those meaningful outcomes that a cognitive experience require? Shulman (1987) suggests that teachers must know what problems to present in a course, when to present them, and how to relate them to student activity in lessons that challenge student thinking. Vygotsky (1978) proposed the concept of "tools" in human learning in his cognitive theory which stresses the link between material and psychological instruments and lively social interactions in the classroom. Based on Vygotsky's notion of the "zone of proximal development" (ZPD) classroom tasks not only present information to the student, but also provide experience by which he/she is able to go beyond what is presented. The student becomes intellectually challenged in his learning by relating what is already known to what might be.

The social context of the classroom is important to Vygotsky who viewed learning as embedded in experiences in bound by communication and exchange. (Kozulin 1990). Students become aware of their cognitive operations only after they are practiced and endorsed by others. New and scientific concepts in that exchange need to be built into the formal curriculum and systematized through everyday use by the learner and his peers.

The role of the teacher as mediator in the learning exchange is a critical link between the student and the curriculum. Good teachers serve as both interpreters and questioners who assist students' construction of knowledge and finely tune classroom exchange for maximum meaning and student benefit. (Presseisen and Kozulin, 1992). Such teaching establishes where a student is in the ZPD and determines the most productivity for both the individual learner and for groups of learners in a classroom.

In the classrooms of the future, a central element of teaching is the way a teacher translates curriculum into student tasks or assignments. Students are expected to assume more responsibility for task-management. A mediational teaching style is one promising approach for assisting unskilled learners to adapt to their expanded task manager role. In mediational teaching, Feuerstein and his colleagues (1980, 1991) refer to the unique interactions by which adults intentionally interpose themselves between the student and an external stimulus .

Mediational teaching is based on the theory of structural cognitive modifiability and the theory of mediated learning experience. This strategy is a new and different way of conceptualising how cognitive skills can be taught. It is based on a model of interactive learning and thinking and the approach has been widely researched, criticised and acclaimed. Feuerstein (1980) maintains that many problems in learning are the result of insufficient or inadequate mediational teaching. He has developed a programme,

Instrumental Enrichment, to provide mediational teaching in a systematic way in the classroom. The general goal of the programme is to teach children prerequisites of thinking and learning so that they will learn how to learn and be able to adapt and adjust to everchanging life conditions.

Systematic training in learning and problem solving skills are given based on fourteen sets of exercises, each focusing on a particular aspect of cognitive functioning. The activities try to stay away from content areas. The teacher's task is to encourage and motivate an awareness of cognitive processes and their transfer to outside personal, social and academic situations. The following cognitive functions are enhanced such as comparative behaviour, systematic search, problem definition, planning, hypothesis testing, spatial and temporal orientation and the ability to consider two or more sources of information simultaneously.

Feuerstein believes that there are two modalities of learning: a direct approach and a mediated approach. (Skuy 1991). The direct approach to learning is based on Piaget's formula of S-O-R which translated means that the organism (O) or individual learner interacts directly with the stimuli (S) of the surrounding world and responds (R). Mediated learning is the second and vital approach that ensures effective learning. Feuerstein develops Piaget's formula of S-O-R further to include a human mediator between the world of stimuli. the organism and the response. His new formula for mediated learning is then S-H-O-H-R, where H is the human mediator. The human mediator interposes himself between the learning organism and the world of stimuli to interpret, guide and give meaning to the stimuli. In this kind of interaction learning and teaching are intentional.

The principle of mediational teaching is based on the assumption that cognitive processing can be substantially modified through effective intervention and this changes the expected course and outcome of development. In addition, it is also assumed that the learning of effective cognitive processes occurs through mediation and that more efficient cognitive functioning can be taught through systematically providing mediated learning experience.

Mediational teaching is the process by which a mediator(teacher) organises and interprets the world to the student(s). When the teacher gives meaning to events, helps students select relevant from irrelevant variable, assists in abstracting rules for regularly occuring phenomena, and generally attempts to develop students' abilities to think, that teacher is engaged in mediational teaching. Mediated learning experience begins within the family context with parents and continues with teachers and significant others, and passing on cultural norms, values and modes of thought from one generation to another. A lack of mediated learning experience, due to a variety of reasons inherent in the mediator or the child, leads to deficient cognitive functioning and low levels of modifiability. The student is not able to adapt to and learn from interactions in his/her environment.

Mediated learning experience has been used extensively in Israel, Venezuela, United States, Canade and in Europe where adolescents and adults have been culturally disadvantaged or mentally handicapped. Evaluations of the Instrumental Enrichment programme have shown considerable gains in groups receiving mediational teaching. (Haywood etal 1982; Greenberg 1990). In addition, teachers who use the programme are very enthusiastic not only in terms of its effect on students' thinking but in terms of its effect on their own teaching skills. Teachers report that their ability to understand each student's learning problems, and thus intervene effectively, improves after teaching this program. (Samuels 1987).

Egozi (1991) noted that many teachers who were trained in the programme changed enthusiastically in their understanding of and attitude towards students with learning difficulties. They were also able to cope with these students and to offer them meaningful teaching. In Blagg's (1991) study a comprehensive evaluation was made of the mediational teaching programme in four secondary schools in England. The results were mixed. The teachers found the materials too abstract and unfamilar, too repetitive and poorly presented and culturally inappropriate. Nevertheless, there were positive outcomes. The teachers who used the programme became more assertive, confident and self reliant. They were also more satisfied with their jobs, more sure of their teaching abilities, more committed to their profession and more valued in their work.

Jensen and Feuerstein (1987) suggest ten criteria for an interaction to be considered mediational and instructive in nature. The first three criteria: intentionality, transcendence and meaningfulness are always present, while a fourth and fifth - regulation of behaviour and mediation of competence are often present. However mediation is a dynamic and open process and should not be rigidly applied nor seen to be fixed at ten criteria. The following are the ten criteria :

intentionality and reciprocity
meaning
transcendence
competence
self-regulation and control of behaviour
sharing behaviour
individuation
goal planning
challenge
self-change

According to Feuerstein's theory, intentionality (and reciprocity), transcendence, and meaning are the three essential characteristics of every mediated interaction. (Feuerstein 1980). The intentionality of the mediator, which is shared by the learner, produces a sense of vigilance that is evidenced by greater attentiveness, focus, and acuity of perception. The transcendence of the mediation interaction refers to going beyond the specific situation or need, and reaching out or "bridging" to goals that may be only slightly, or not apparently, related to the original situation. Mediation is characterised by an affective, motivational or value-oriented event or experience that leads the student to become meaningfully involved in the learning. (Ben-Hur 1994).

All the ten components of mediational teaching are each individually used as a powerful instructional tool for teachers. In all of them the key to a reflective classroom dialogue is how the teacher talks, listens to students, and encourages student-to-student discourse. In the traditional classroom, the teacher does most of the talking but in the restructured classroom, the teacher acts responsively to students' questions and understanding. The teacher is not asked to replace his own behaviour, which has been culturally determined or produced by his individual preference or style. Thus, this model of mediational instruction , as a theory and as an operational system, allows us to understand human plasticity and modifiability. It serves as a powerful guide in shaping the interaction of the growing human being.

In the Singapore classroom

In response to recent stress on infusing core thinking into subject curriculum in Singapore, mediational teaching is being incorporated into the preservice training modules of the National Institute of Education. This study is ongoing and only qualitative data have been analysed so far. Preservice graduate and undergraduate teachers (n=74) in their first year at the NIE were given 20 hours training in the application of the ten mediational teaching criteria. The theory and practice of mediated learning experience were embedded in an education studies elective module. A manual was developed to accompany the training.

After the training workshop, the student trainees were posted for about 10 weeks teaching practice (known as the practicum) in several primary and secondary schools. During their practicum, the trainees were encouraged to implement the mediational strategy in all their content lessons. Anecdotal records, video tapes of their lessons and a reflective rating scale were used and these were submitted for analyses towards the end of their practicum.

The training of the mediational teaching strategy to the 74 student teachers had resulted in basically two areas: the mediational training had addressed their individual cognitive needs as well as assisting them in their instructional tasks. Despite the short training period, sufficient awareness has been created.

Based on their submitted anecdotal records and observations, the results appear very promising. A few highlights of the analyses are :

1 Preservice teachers sent to the primary schools tend to focus on pupil behaviour problems compared to those focusing on learning problems in the secondary schools.

2 It is much easier to mediate effectively on social tasks than on cognitive tasks.

3 The first three criteria ie intentionality and reciprocity, meaning and transcendence are usually implemented consistently and successfully.

4 The most difficult mediational skill to implement is mediation for self change. This activity was insufficiently implemented.

5 A few teachers indicate that they face some conflict when their own supervisors suggest a teaching style that does not allow for mediational teaching. Their anxiety level went up when they had insufficient time to plan and prepare mediational based lessons especially novices who had not done any previous relief teaching.

6 Several teachers remained despondent after the practicum period about the plight of really low achievers in their classes. They were aware of their potential for learning but frustrated in not being able to mediate more because of limited time and resources.

7 There was some encouraging evidence of attitudinal change among the pre-service teachers (though it is too early yet to monitor or measure this behaviourial change). Their comments suggest that they are more careful and thoughtful over how they plan their daily lessons in their own subject areas. They pay close attention to how different pupils should be grouped for different forms of classroom involvement and participation. During their course of their teaching practice, it was generally agreed that their pupils have become more competent in their work though the bridging process did not work well all the time.

8 Two rating scales were used in this study. Each trainee was assessed on their teaching by their supervisors based on the APT (Assessment of Performance on Teaching) form and everyone of them assessed themselves at least once on one lesson based on the Mediated Learning Experience Rating Scale. Feedback suggests that the Rating Scale should be used for more lessons across different content areas. Some mediational activities are highlighted as more meaningful for certain subject areas. The preservice teachers rated the Scale as more comprehensive than the APT form which has been developed by the Institute for the practicum evaluation.

Conclusion

This study is important not so much for its "scientific" findings - the sample was small and the teachers were particularly interested in the workshop as it was an elective module- but in the fact that it confirms the views of teachers who have worked on the thinking programme around the world. The training and use of mediational teaching is the first time many teachers come into contact with a theory and a method that can give them an understanding of the development of children's thinking , a diagnostic tool and a theorised style and practice of teaching.

In a report on the training of teachers in mediational teaching in Vanderbilt University, it is noted that :

"most teachers' reactions to the workshops have been very positive ...Many teachers who have gone through numerous workshops and have completed their training in all the instruments keep coming back to workshops. Sometimes they are repeating the training they received but they state, nevertheless, that they continuously learn new aspects of the programme and improve their understanding of it."" (Blagg, 193)

This paper is not intended to be a highly detailed and thorough evaluation of the application of mediational principles by pre-service teachers in their practicum. Not all teachers are capable of learning how to teach in the restructured classroom Some teachers tend to be more successful and have developed a much better use of probing questions in classroom discussions and to deploy strategies involving students in higher order level thinking.

The training programme outlined by Feuerstein cannot be curtailed even for experienced teachers. In the Singapore study the training period (20 lessons only compared to the required 50 for novice teachers) is too short to allow for any strong effects of mediational teaching to work effectively on these trainees. However, there is some basis for certain attitudinal changes occuring . It appears that the positive results of this small study are related more to the underlying rationale of the mediated learning experience theory than on the materials and activities drawn out from the manual.

The perceptions of these pre-service teachers regarding the training workshop are encouraging. Majority reported that they would continue to use mediational teaching skills even after graduation. They would like to carry on using certain aspects of the manual in their teaching despite its limitations. A few indicated that in-service training would be a welcome feature to allow them to implement the programme adequately. Administrative support is important and it is urgent that principals must be familiar with mediational principles and applications. A few suggestions indicate that it is highly desirable for additional follow-up sessions to occur over a period of time. Peer sharing

and coaching are recommended. Further development and replication of the workshop materials are still necessary for training more groups of pre-service teachers from the preschool to graduate teacher training programmes.

A few recommendations can be made. It is shown that the teaching of cognitive skills is highly necessary and urgent in today's schools, not only as a response to the pressing call from the Ministry of Education, but as a vital step to instil in our students a critical mindset in readiness for the 21st century. Appropriate teaching resources and materials in cognitive education for teachers to use must be developed and made accessible. These must be periodically assessed and evaluated to suit specific content areas taught in schools. There is also a need for training in mediational teaching skills to be organised on a more extensive and ongoing basis both for pre-service and in-service teachers. An integrated and comprehensive approach towards the teaching of thinking strategies across all levels of education has to be determined and mapped out. A promising start has been made with the ten components of the Mediational Teaching Skills approach in the pre-service teaching training programmes. However, much remains to be done.

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NANYANG TECHNOLOGICAL UNIVERSITY
NATIONAL INSTITUTE OF EDUCATION

ASSESSMENT OF PERFORMANCE IN TEACHING

Name of Student : _____ Subject _____ CS 1 / 2 / 3 * Programme: _____ Intake: July / 199__

School/JC : _____ Lesson _____ Lesson Observation: 1 / 2 / 3 / 4 / 5 / 6 *

Class : _____ Time: _____ Unit _____ (* Please circle)

PROCESSES	COMPETENCIES	COMMENTS
1. PLANNING A B C D F	• Delineating learning objectives ( ) • Content knowledge ( ) • Selecting content/ materials/media ( ) • Determining procedures ( )	
2. DEVELOPING THE LESSON A B C D F	• Arousing interest ( ) • Stimulating thinking ( ) • Encouraging participation ( ) • Maintaining pace of lesson ( ) • Lesson closure ( )	
3. COMMUNICATING A B C D F	• Explaining and informing ( ) • Questioning and responding ( ) • Use of voice ( ) • Command of language ( ) • Using media and resources ( )	
4. MANAGING A B C D F	• Establishing rapport ( ) • Managing behaviours ( ) • Managing group/individual work ( ) • Managing time ( )	
5. EVALUATING A B C D F	• Using and giving pupil feedback ( ) • Monitoring pupil understanding ( ) • Encouraging pupil evaluation ( ) • Using and marking written work ( )	

TEACHER CHARACTERISTICS	PROFESSIONAL ATTITUDE/CONDUCT, GENERAL COMMENTS, AND SUGGESTED ACTION:	
Task Orientation ( ) Flexibility ( ) Enthusiasm ( ) Warmth ( )		Name of Supervisor Signature Date

Grades: (A) Excellent; (B) Very Good; (C) Good; (D) Pass; (F) Fail

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RATING SCALE

MEDIATED LEARNING EXPERIENCE RATING SCALE

This rating scale comprises a list of mediational activities which may occur in a classroom. The activities are grouped into ten sections according to the main criterion of Mediated Learning Experience.

The rating scale affords the opportunity to rate the quality of mediation being exercised by a mediator, for example a teacher.

RATING

To carry out your rating mark the appropriate column in the following way.

• Noopportunity	=	The lesson did not allow for the occurrance of the MLE activity / approach.
• Missedopportunity	=	The teacher did not implement MLE activity / approach when the situation allowed for it.
• Usually implemented	=	The MLE activity was consistently and successfully implemented.
• Sometimes implemented	=	The MLE activity was occassionally implemented.
• Negation	=	The teacher's activity / approach was insufficient or in opposition to MLE.

The activities / approaches under each criterion are not exhaustive. Any additional or different examples can be described under the heading 'Other'.

DESCRIPTION OF MLE ACTIVITY	NO OPPORTUNITY	MISSED OPPORTUNITY	USUALLY IMPLEMENTED	SOMETIMES IMPLEMENTED	NEGATION	DESCRIPTION OF ACTIVITY WHICH IS INSUFFICIENT OR IN CONTRADICTION TO MLE
INTENTIONALITY AND RECIPROCITY						
1 Teacher arouses student interest and motivation						1 Teacher fails to engage students
2 Students ask questions relevant to the subject matter						2 Students do not participate in relevant discussion
3 Teacher gives appropriate feedback on students verbal contribution						3 Teacher is insensitive to students verbal contribution
4 Teacher gives appropriate feedback on students written contribution						4 Teacher fails to give meaningful comment on students written contribution
5 Teacher is willing to re-explain when work is not understood						5 Teacher does not take cognizance of the need for re-explanation
6 Teacher comes prepared for the lesson and creates a sense of anticipation by changing classroom atmosphere						6 Teacher did not prepare adequately for the lesson and fails to create enthusiasm
7 Other:						7 Other:
MEANING						
1 The teacher explains the importance or value of a subject						1 The teacher fails to provide the purpose or relevance of activities or subjects
2 The teacher explains the reason for focusing on a subject						2 The teacher focuses on a subject without giving explicit reasons for doing so
3 The teacher transforms material by changing frequency and/ or intensity of presentation						3 The teacher fails to vary presentation in order to convey to students the importance or value of a subject
4 The teacher gives positive or negative feedback in explanation to a students responses						4 The teacher responds indifferently to student responses
5 The teacher asks more 'how' and 'why' questions - proccess questions						5 The teacher asks more 'who' and 'what' questions - content questions
6 Other:						6 Other:

A

DESCRIPTION OF MLE ACTIVITY	NO OPPORTUNITY	MISSED OPPORTUNITY	USUALLY IMPLEMENTED	SOMETIMES IMPLEMENTED	NEGATION	DESCRIPTION OF ACTIVITY WHICH IS INSUFFICIENT OR IN CONTRADICTION TO MLE
TRANSCENDENCE						
1 The teacher explains a concept or principle beyond the scope of the present subject matter						1 The teacher fails to bridge concepts to related subject matter
2 The teacher explains the relationship of the subject of the lesson to previous or future subjects						2 The teacher presents each subject as an isolated and unrelated set of information and ideas
3 The teacher explains how the underlying process in solving a problem can be applied to another situation						3 The teacher fails to show how one problem solving approach can be applied to a variety of situations
4 The teacher promotes the use of work habits which are useful beyond present needs						4 The teacher fails to show how particular work habits may be used in a different context
5 Other:						5 Other:
COMPETENCE						
1 The teacher selects and presents material appropriate to the students level of development						1 The teacher fails to take into account students level of development when selecting and presenting material
2 The teacher phrases questions according to students level of competence						2 The teacher's questions are not pitched at an appropriate level
3 The teacher encourages students to be aware of their progress relative to their own standards						3 Students progress is only measured according to the class average
4 The teacher breaks down a complex task into its simpler parts to reduce anxiety						4 The teacher fails to reduce anxiety by showing how a complex task can be simplified
5 The teacher praises successful steps towards completion of a task						5 The teacher only praises successful completion of a task
6 The teacher rewards participation in an activity						6 The teacher does not reward participation
7 Other:						7 Other:

C

D

A	1	2	3	4	5	Null
Q1	0	0	22	5	0	1
Q2	1	0	16	11	0	0
Q3	0	2	15	11	0	0
Q4	2	0	15	10	0	1
Q5	0	1	21	5	0	1
Q6	1	0	19	8	0	0

A	1	2	3	4	5	Null
Q1	0	0	78.6	17.9	0	3.6
Q2	3.6	0	57.1	36.3	0	0
Q3	0	7.1	53.6	36.3	0	0
Q4	7.1	0	53.6	35.7	0	3.6
Q5	0	3.6	75.0	17.9	0	3.6
Q6	3.6	0	67.9	28.6	0	0

B	1	2	3	4	5	Null
Q1	4	3	8	12	1	0
Q2	5	4	4	12	3	0
Q3	3	0	10	10	3	2
Q4	0	1	20	7	0	0
Q5	2	2	13	11	0	0

B	1	2	3	4	5	Null
Q1	14.3	10.7	28.6	42.9	3.6	0
Q2	17.9	14.3	14.3	42.9	10.7	0
Q3	10.7	0	35.7	35.7	10.7	7.1
Q4	0	3.6	71.4	25.0	0	0
Q5	7.1	7.1	46.4	36.3	0	0

C	1	2	3	4	5	Null
Q1	7	0	7	11	3	0
Q2	4	2	14	7	1	0
Q3	4	1	11	10	2	0
Q4	1	2	10	9	4	2

C	1	2	3	4	5	Null
Q1	25.0	0	25.0	36.3	10.7	0
Q2	14.3	7.1	50.0	25.0	3.6	0
Q3	14.3	3.6	36.3	35.7	7.1	0
Q4	3.6	7.1	35.7	32.1	14.3	7.1

D	1	2	3	4	5	Null
Q1	0	0	23	5	0	0
Q2	0	1	23	4	0	0
Q3	0	4	10	11	3	0
Q4	1	0	17	9	1	0
Q5	0	2	21	5	0	0
Q6	0	2	14	10	1	1

D	1	2	3	4	5	Null
Q1	0	0	82.1	17.9	0	0
Q2	0	3.6	82.1	14.3	0	0
Q3	0	14.3	35.7	36.3	10.7	0
Q4	3.6	0	60.7	32.1	3.6	0
Q5	0	7.1	75.0	17.9	0	0
Q6	0	7.1	50.0	35.7	3.6	3.6